SHARP Service Manual

APSS Auto Program Search System

DOLBY SYSTEM ®

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MODEL RT-1155H

In the interests of user-safety the set should be restored to its original condition and only parts indentical to those specified be used.

SPECIFICATIONS

Type:	AC operated 4-track 2-channel Solid-state Stereo Cassette Tape Record/Playback Deck with Built-in Dolby "B" type Noise Reduction & Full-automatic Stop System
Power source:	AC 110/220/240 V, 50/60 Hz
Power consumption:	13 watts
Semiconductors:	4-transistor, 20-Auxiliary Transistor, 4-IC, 25-diode, 3-Light Emitting Diode
Dimensions:	408 mm(W) x 250 mm(D) x 157 mm(H)
Weight:	5.5 kg
Input circuitry:	Microphone jack 500 ohm x 2 Line input jack 72K ohm x 2 REC/PB (DIN) socket x 1
Output circuitry:	Headphones output jack 8 ohm x 1 Line output jack x 2 REC/PB (DIN) socket x 1
Tape:	Philips standard compact cassette tape
Tape speed:	4.8 cm/sec
Record/playback time:	60 minutes (C-60)
Recording system:	AC bias system (84 kHz)
Erasing system:	AC erasing
Fast forward & rewind time:	120 seconds (C–60)
Wow & Flutter:	0.1% W.R.M.S. 0.25% (DIN 45 507)
Frequency response:	40 –14,000 Hz (DIN 45 511) 40 –12,000 Hz @±3 dB (Use of Fe-Cr tape or CrO_2 tape) 40 – 11,000 Hz (DIN 45 511) 40 – 10,000 Hz @±3 dB (Use of normal tape)
S/N ratio:	50 dB (For normal tape, at LINE IN, under Dolby Noise Reduction off mode)
Dolby NR effect:	10 dB (at over 5 kHz)
Distortion:	1.5%
Channel separation:	34 dB
Erase ratio:	65 dB
Input sensitivity & input impedance:	Microphone 0.2 mV @6.8K ohm Line in 50 mV @72K ohm REC/PB(DIN) socket 0.2 mV @6.8K ohm
Output level & loaded impedance:	Headphones 63 mV (0VU) @8 ohm Line out 500 mV (0VU) @50K ohm REC/PB(DIN) socket 500 mV (OVU) @50K ohm

SHARP CORPORATION OSAKA, JAPAN

CABINET REMOVAL (Refer to Figure 1)

1. Remove 4 screws (A) retaining the wooden plate (B).
2. Gently pull upward the cabinet (C).

BOTTOM LID REMOVAL (Refer to Figure 1)

1. Remove 7 screw (D) retaining the bottom lid (E).
2. Gently pull upward the bottom lid (E).

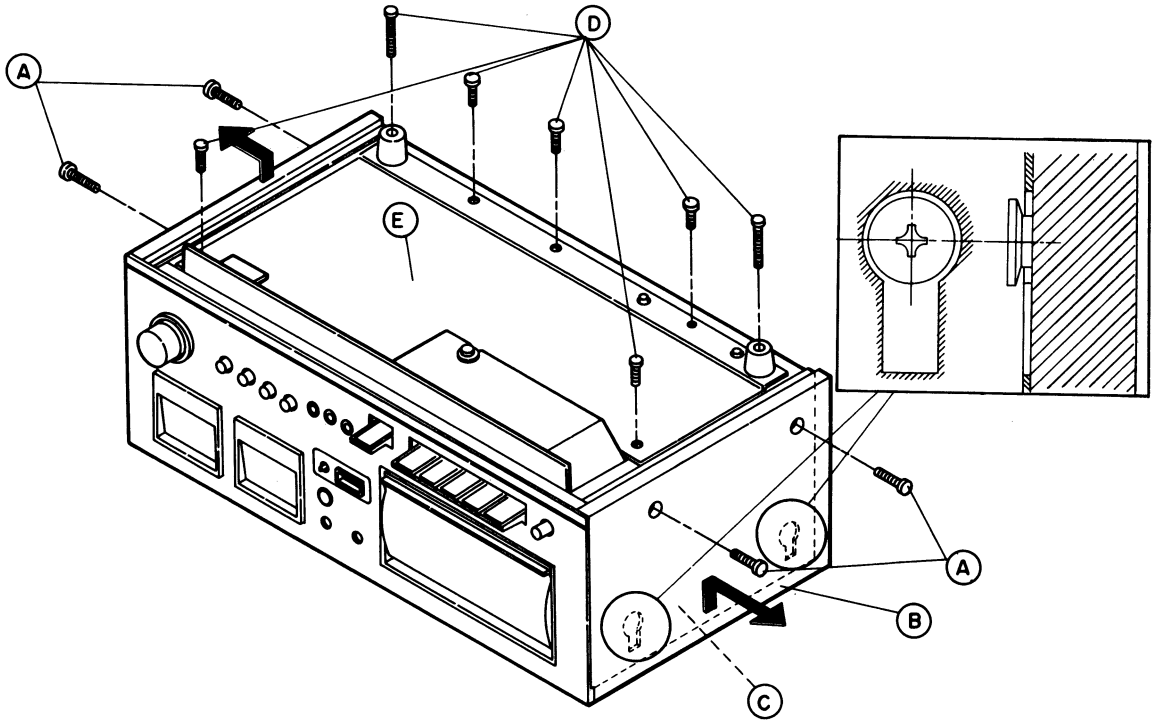


Figure 1

PAUSE MECHANISM ADJUSTMENT (Refer to Figure 2)

1. Put the mechanism in playback mode and slowly depress the pause pushbutton. At the time, see that the take-up idler and take-up turntable come off from each other and also the capstan shaft and pressure roller come off from each other.
2. If it is found that the checking in the step 1 above is not satisfied, further adjust the adjustment point shown in Figure 2.

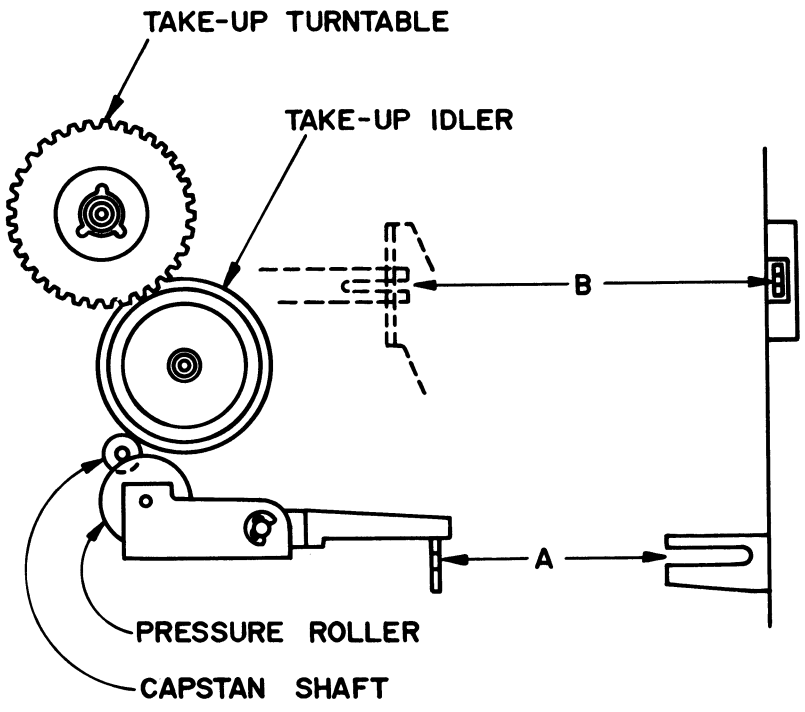


Figure 2

PRESSURE ROLLER PRESSURE ADJUSTMENT

(Refer to Figure 3)

1. With power supply turned on, push the point A with use of tension gauge to make the pressure roller apart from the capstan shaft. Then, gradually release the tension gauge and read its value when the pressure roller starts to rotate.
2. It is normal when the tension gauge reads 250 – 350 g. (8.8 – 12.3 oz). If the above value is not satisfied, change the setting position of pressure spring.

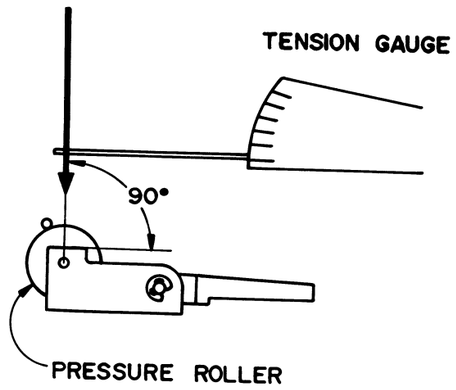


Figure 3

FLYWHEEL THRUST CLEARANCE ADJUSTMENT

(Refer to Figure 4)

Slowly tighten the screw for flywheel thrust clearance until the thrust clearance becomes 0 (zero) and loosen the screw by 1/5 ~ 2/5 turn from this point. Since screw's pitch is 0.5 mm, thrust clearance of about 0.1 ~ 0.2 mm is produced.

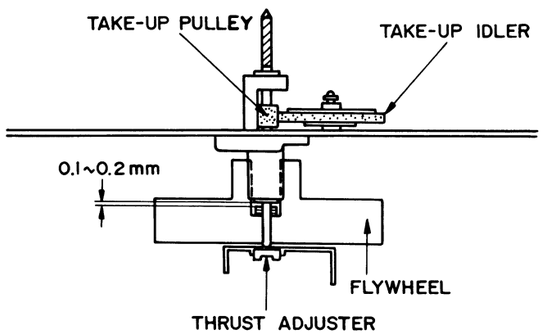


Figure 4

TORQUE CHECK (Refer to Figure 5)

1. Set the torque measuring reel to the turntable (to the take-up side at playback or fast forward mode and to the supply side at rewind mode).
2. Then, rotate the reel in the same direction as for turntable and read the torque value when the pointer is stabilized.

Mode	Torque Value
Play back	35 – 60 gr. cm
Fast Forward	60 –100 gr. cm
Rewind	60 –100 gr. cm

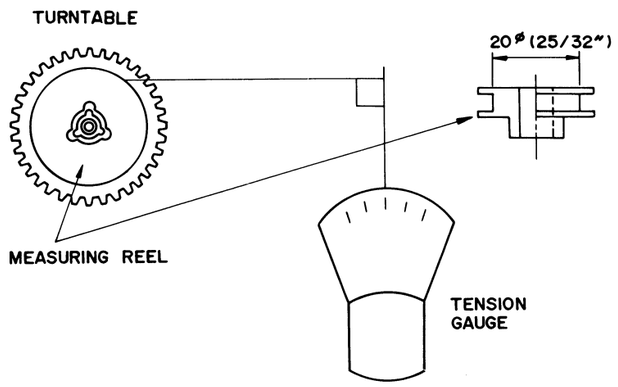


Figure 5

AUTO STOP SOLENOID SETTING POSITION ADJUSTMENT (Refer to Figure 6)

Push the core of auto stop solenoid (SOL 401) and depress the play key.
At the time, adjust the screws retaining the auto stop solenoid so that the mechanism is changed to stop mode.

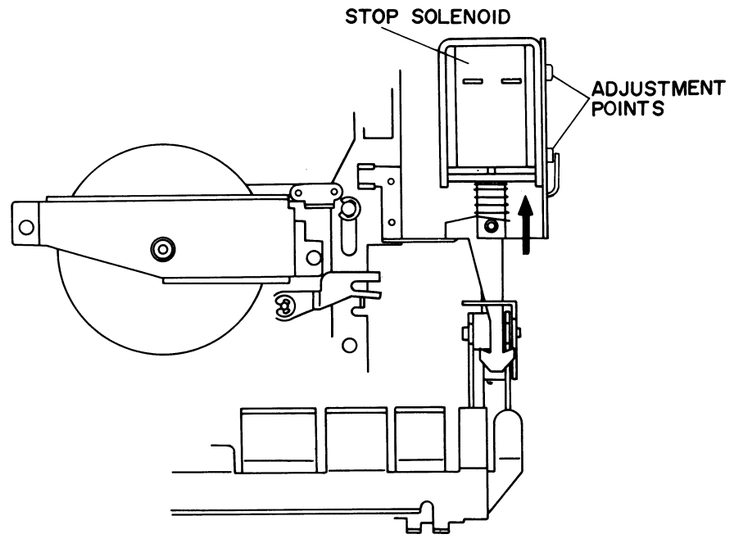


Figure 6

CHECK OF TAPE SPEED (Refer to Figure 7)

1. Playback a test tape of 3,000 Hz, available in the market.
2. Connect 50 K ohm dummy resister to the line output jack (J3C, J3D), and connect the input terminals of the speed meter or the wow meter to the resistor.
3. It is normal when the regeneration frequency is within ±1% of the meter.
4. When the results of measurement are not satisfactory, take off oil on the belt or pulley. When the motor or the pulley does not smoothly revolve, feel oil or change the part.
If the operation is still abnormal, adjust the semi-variable resistor (Part of motor) in the motor by using a screw driver.

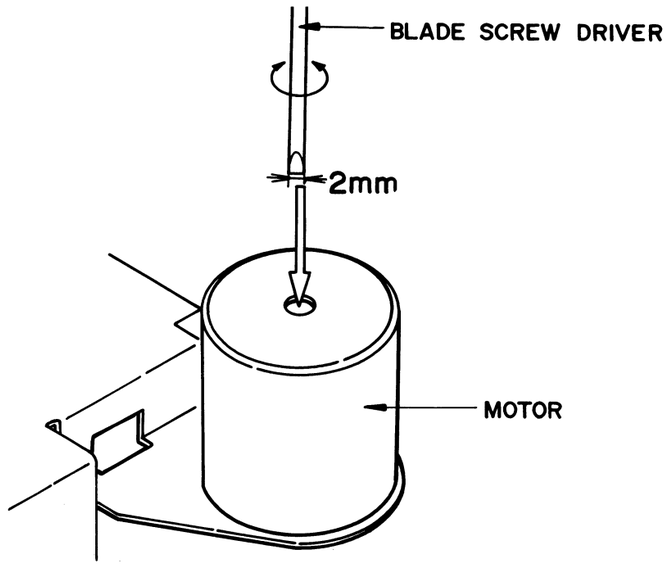
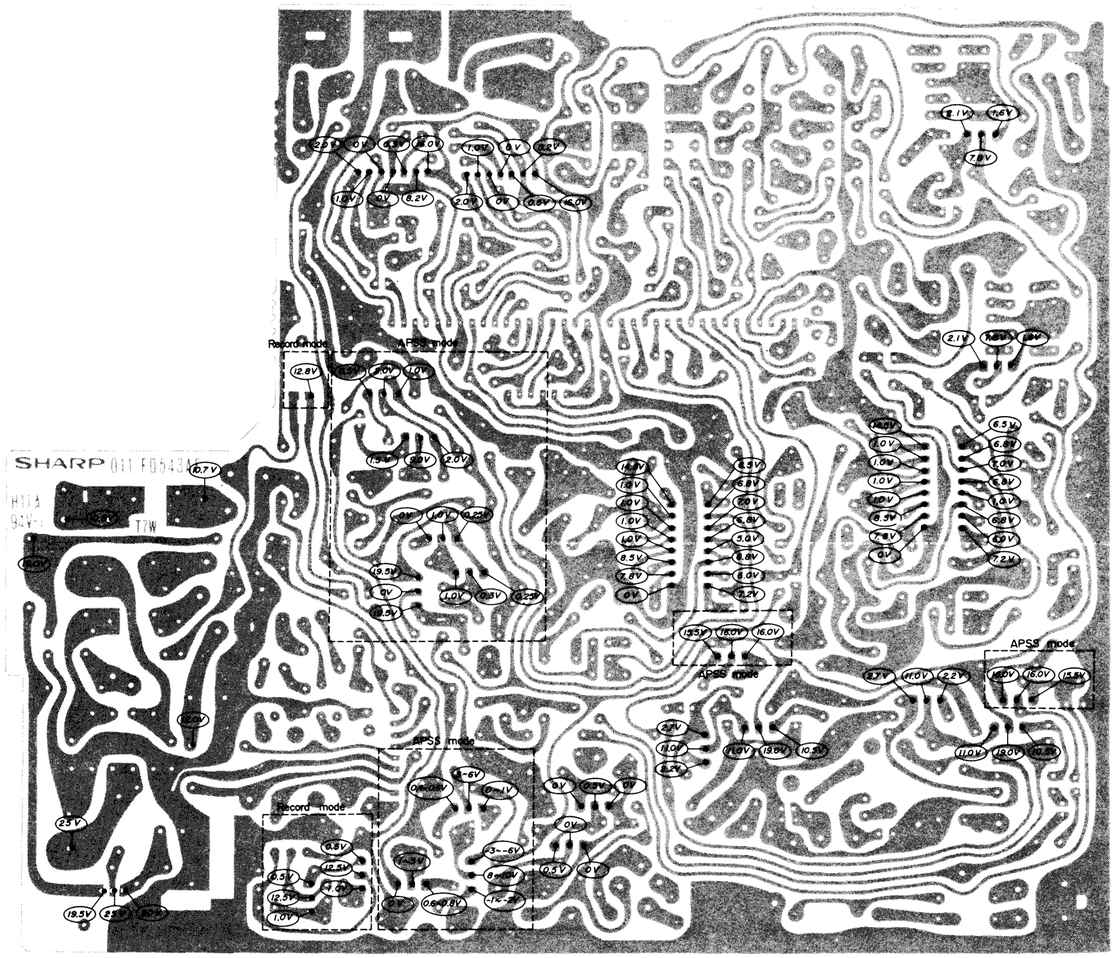


Figure 7

VOLTAGES ON PRINTED WIRING BOARD



Note ; ·ICs and Transistors voltage shows in playback mode.
·Circuit tester range : DC voltage (20 Kohm/volt) range.

Figure 8

ELECTRICAL ADJUSTMENT

ADJUSTMENT POINTS

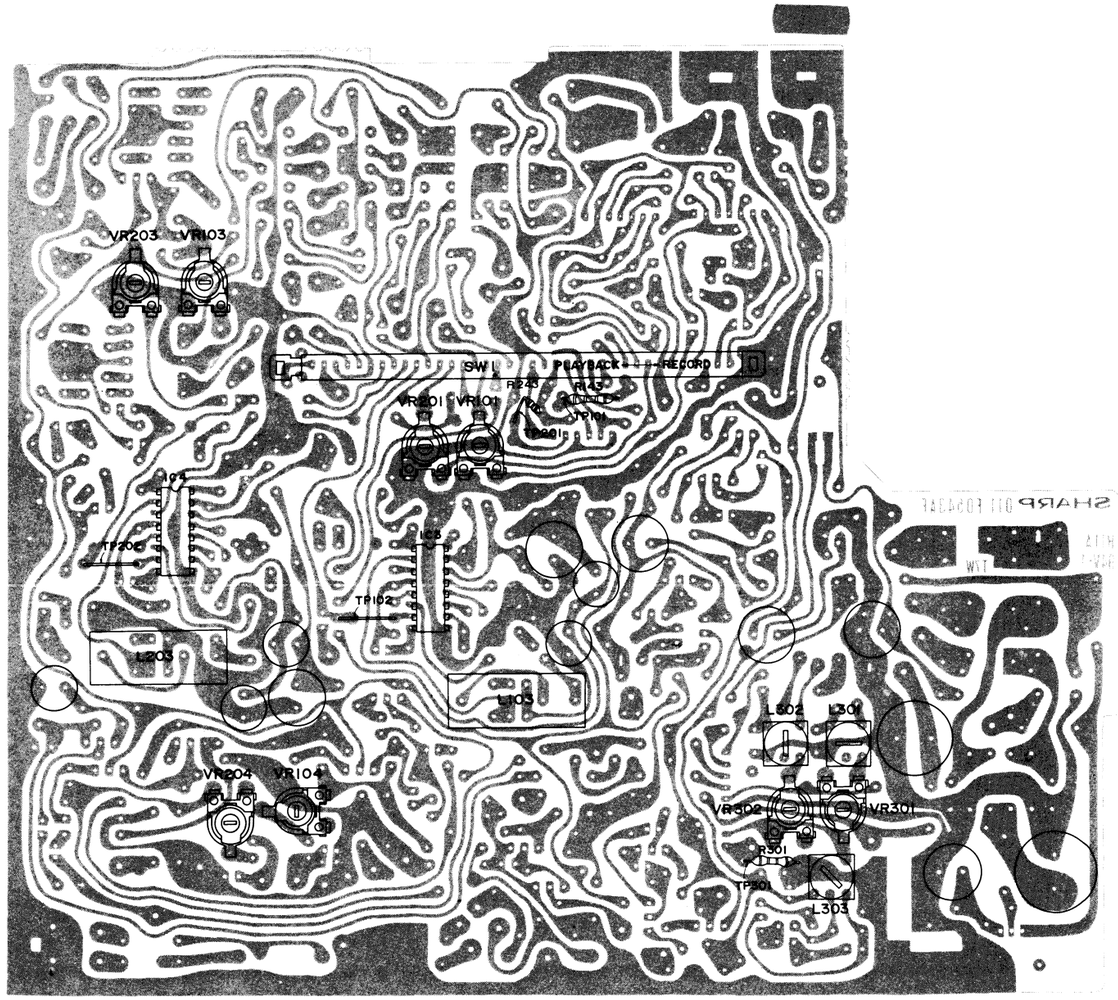


Figure 9

RECORD AMPLIFIER BIAS OSCILLATOR ADJUSTMENT (Refer to Figure 10)

1) Connect the V.T.V.M. to the test point (TP101, TP201) and earth.
2) Set the equalizer selector switch (SW2) and bias selector switch (SW3) in the CrO_2 position.
3) Set the unit at record mode.
4) Adjust the oscillation coil (L303) so that the bias oscillation frequency becomes 84 kHz.
5) Set the equalizer selector switch (SW2) and bias selector switch (SW3) in the normal position.
6) Adjust the semi-variable resistor (VR301, VR302) so that the V.T.V.M. reads 50 mV.
7) To check the CrO_2 position, leave equalizer selector switch (SW2) and bias selector switch (SW3) in the CrO_2 position. It is normal if V.T.V.M.'s reading is 63 ~ 71 mV.

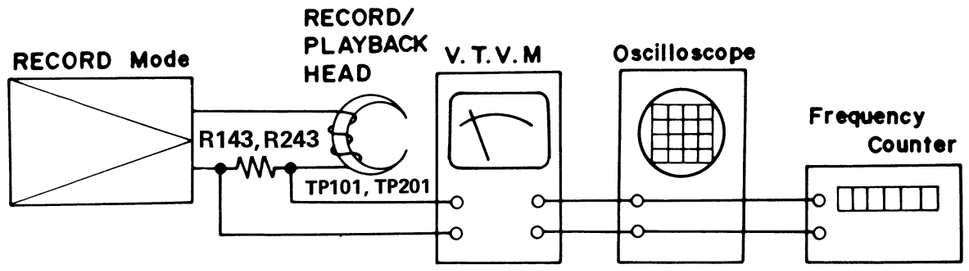


Figure 10

ERASE CURRENT CHECK (Refer to Figure 11)

1) Connect the V.T.V.M. to the test point (TP301) and earth.
2) Set the equalizer selector switch (SW2) and bias selector switch (SW3) in the normal position.
3) Set the unit at record mode.
4) It is normal if V.T.V.M.'s reading is 52 ~ 89 mV.
5) To check the CrO_2 position, leave equalizer selector switch (SW2) and bias selector switch (SW3) in the CrO_2 position. It is normal if V.T.V.M.'s reading is 70 ~ 120 mV.

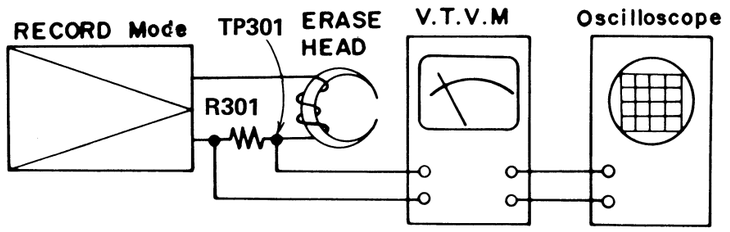


Figure 11

RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT (Refer to Figure 12)

1) Connect the V.T.V.M. to the test point (TP102, TP202) and earth.
2) Set the equalizer selector switch (SW2) and bias selector switch (SW3) in the normal position.
3) Set the Dolby NR switch (SW5) in the off position.
4) Insert the test tape (TEAC MTT–114, 10 kHz, 250 pWb/mm–10 dB recorded) and play it.
5) Adjust the adjusting screw so that the playback output voltage of the test tape becomes maximum in both sides and the phase between channels gets same.

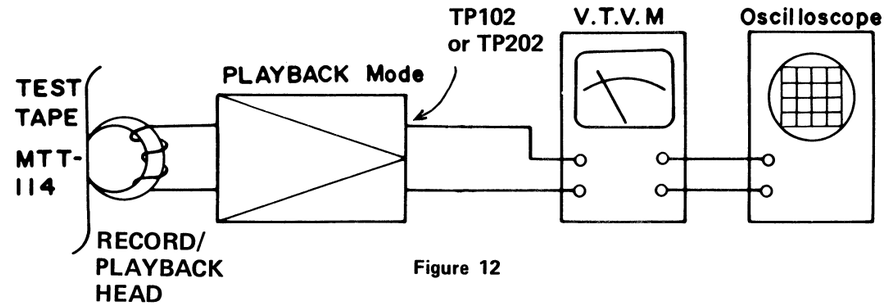


Figure 12

PLAYBACK SENSITIVITY ADJUSTMENT (Refer to Figure 13)

1) Connect the V.T.V.M. to the test point (TP102, TP202) and earth.
2) Set the equalizer selector switch (SW2) and bias selector switch (SW3) in the normal position.
3) Set the Dolby NR switch (SW5) in the off position.
4) Insert the test tape (TEAC MTT–150, 400 Hz, 200 pWb/mm recorded) and play it.
5) At this time, adjust the semi-variable resistor (VR101, VR201) so that the V.T.V.M. reads 580 mV.

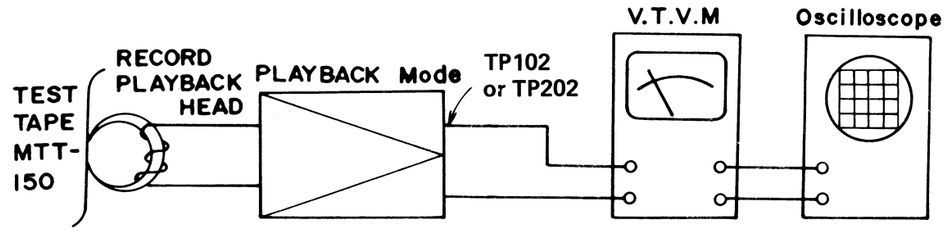


Figure 13

LEVEL METER SENSITIVITY ADJUSTMENT (Refer to Figure 14)

1) Connect the V.T.V.M. to the test point (TP102, TP202) and earth.
2) Set Dolby NR switch (SW5) in the off position, and input selector switch (SW4) in the line input position.
3) With the unit set at record mode, give it signal of –10 dB, 1 kHz from line input jacks (J3A, J3B) and adjust record level control (VR102, VR202) so that the V.T.V.M. reads 580 mV.
4) At this time, adjust the semi-variable resistor (VR104, VR204) so that the level meter indicates Dolby level (it means a level of "+3VU" indicated on the level meter).

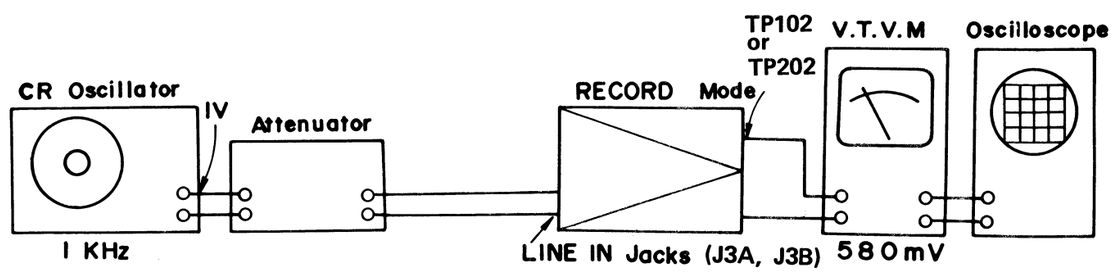


Figure 14

Described as above, the Dolby NR circuit compounds linear signal and non-linear signal to produce compressor characteristic in record mode and expander characteristic in playback mode – if these two characteristics are mixed, an original linear characteristic is restored. Thus, noise is reduced because high-frequency signal is attenuated when it passes through the expander circuit.

Cautions on Repairing

1) The following parts out of those which are used for Dolby NR circuit should be at less than the error of ± 5%.
   R145, R245, R114, R214, R119, R219, R121, R221, C114, C214, C115, C215, C116, C216, C119, C219
2) The following parts should be those with the error of within ± 10%.
   C113, C213, C112, C212
   * If the following tapes are used under Dolby NR mode, high-frequency may be lowered.
     BASF standard tape, SCOTCH standard tape and MEMOREX CrO_2 tape.
   * If you repair the unit owned by an user who employs the tape of a particular brand, it is recommendable when servicing to use the same tape as used by the user.

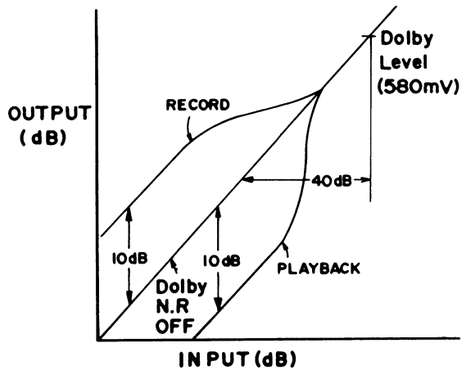


Figure 20

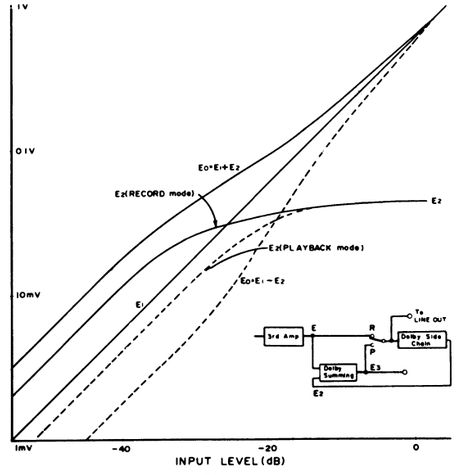


Figure 21

APSS (Auto Program Search System)

APSS is an abbreviation of Auto Program Search System uniquely developed by SHARP, which can automatically detect the starting position of each program.
With the APSS system, if the fast forward button or rewind button is depressed during playback mode, the tape is fast forwarded to the starting position of the next program (the end position of the previous program) and then the fast forward button or rewind button is automatically released to make the mechanism be put in playback mode.

OUTLINE OF APSS

- **LIMITER AMP.**
  This amplifier is composed of Q401 and Q402 and serves to amplify the output of pre-amplifier to the level where the APSS starts to operation.
- **VOLTAGE DOUBLING RECTIFIER CIRCUIT**
  This voltage doubling rectifier circuit is composed of D401 and D402.
- **TIME CONSTANT CIRCUIT**
  This time constant circuit is composed of R409 and C404.
- **LEVEL COMPARISON CIRCUIT**
  This level comparison circuit is composed of Q403 and Q404. With this level comparison circuit of which the function is based on switching characteristic of transistors, the rectifying voltage, which has been produced by the voltage doubling rectifier circuit and time constant circuit, is used to be input to the base of Q403.
- **PLUNGER CONTROLLED CIRCUIT**
  This plunger controlled circuit is composed of Q405 and Q406. The Q405 is a differential circuit to utilize the signal coming from the level comparison circuit to initiate the plunger only at the breaking time.
  The Q406 uses the signal coming from the differential circuit to cause switching of the plunger.

FUNCTION OF APSS (Auto Program Search System)

The following are detailed functions of the system. During APSS mode, signals amplified by the integrated circuit (IC1, IC2) enter the limiter amplifier (Q401, Q402) and limited by the transistors (Q401, Q402) and the output of Q402 is rectified by the diodes (D401 and D402). The output of D402 is compared by the level comparison circuit (Q403 and Q404). Next, when the Q403 is turned on, the Q404 is turned off, and the potential of Q404 collector stabilizes at 19.5 V.
Therefore the Q405 is not turned on, in consequence, neither is the Q406. As a result, Q406 is not actuated. In other words, as far as the tape carries signals the plunger does not work, that is, the tape is continuously fast forwarded according to the mechanism of the APSS.
Meanwhile, when there is no signal on the tape, therefore the Q403 is turned off, the Q404 is turned on. Therefore, the collector potential of Q404 becomes 0 V, and consequently, the 19.5 V voltage passes through the R415, allowing a discharge current to flow towards the C405. By this discharge current the potential of the Q405 base drops momentarily, and the Q405 is turned on, the current runs in the base of Q406. At this time, current runs in the solenoid to make it be attracted and the mechanism is changed to playback mode from APSS mode.

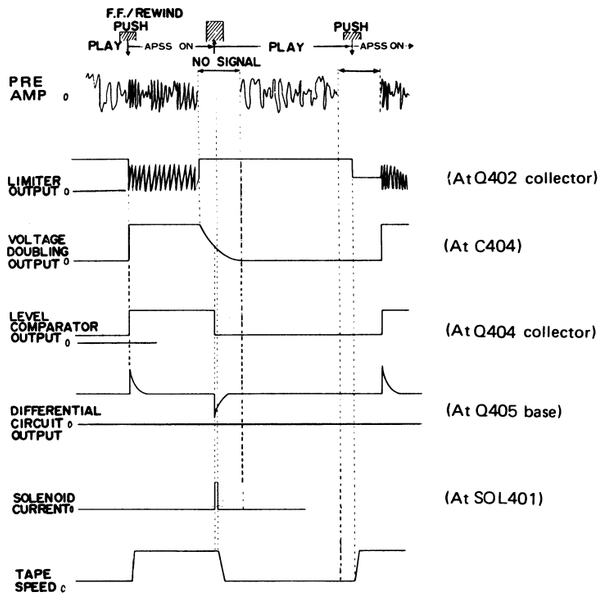


Figure 22

FUNCTIONS OF FULL AUTOMATIC STOP SYSTEM

This unit employs a system in which the reed switch (SW10) detects a variation of magnetic field caused by the rotation of a magnet mounted on the counter shaft. While the magnet on the counter shaft rotates (in playback, fast forward and rewind modes), the contact of reed switch (SW10) is opened or closed, and pulses produced by the reed switch (SW10) are rectified by diode (D406) to charge a capacitor (C409) negatively. As a result, the potential at the base of transistor (Q407) reaches approx. 0.5 V, resulting in no operation of multivibrator consisting of transistors (Q407 and Q408). On the other hand, when the rotation of magnet on counter shaft is stopped (i.e. when the tape reaches its end in playback, fast forward and rewind modes), no contact of reed switch is opened or closed at all. Consequently, no pulses are produced by the switch, which stops the negative charging of capacitor (C409). This allows a current to flow through resistor (R420), causing capacitor (C409) to be charged positively. As a result, the potential at the base of transistor (Q407) exceeds 1.5V, which actuates the multi-vibrator consisting of transistors (Q407 and Q408) to turn them on and off alternately and repeatedly. When Q407 is turned on, Q406 is turned on to allow a current to flow into solenoid (SOL 401). As a result, the core of solenoid is attracted to put the mechanism in the stop mode. When the tape reaches its end in the APSS (Auto Program Search System) mode, the APSS key is unlocked due to the first attraction of solenoid and the play key is unlocked due to the second attraction, which put the mechanism in the stop mode.

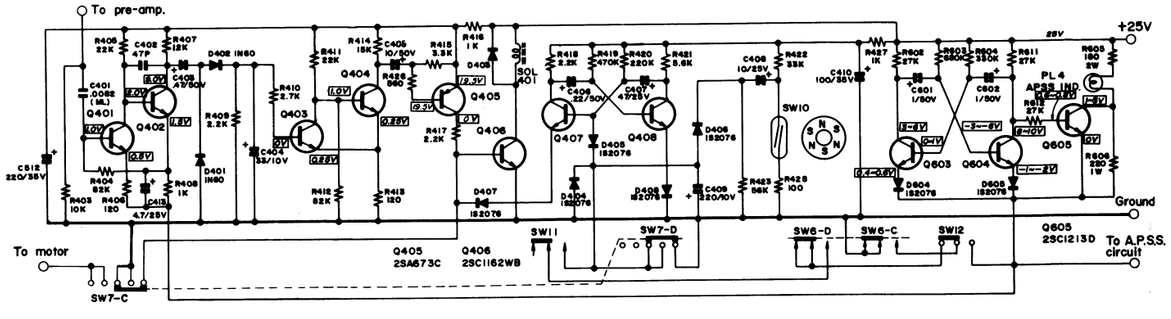


Figure 23

RECORD/PLAYBACK SENSITIVITY ADJUSTMENT (Refer to Figure 15)

1) Connect the V.T.V.M. to the test point (TP102, TP202) and earth.
2) Set Dolby NR switch (SW5) in the off position, and input selector switch (SW4) in the line input position.
3) Set the equalizer selector switch (SW2) and bias selector switch (SW3) in the normal position.
4) Insert the normal tape (TEAC MTT–502 or BASF QP–12–C521 V).
5) With the unit set at record mode, give it signal of –10 dB, 1 kHz from line input jacks (J3A, J3B) and adjust record level control (VR102, VR202) so that the V.T.V.M. reads 410 mV.
6) And playing it.
7) Adjust the semi-variable resistor (VR103, VR203) so that the V.T.V.M. reads 410 mV.
8) To check the CrO_2 tape (TEAC MTT–505 or BASF TP–18–C401R), leave equalizer selector switch (SW2) and bias selector switch (SW3) in the CrO_2 position.
9) It is normal if V.T.V.M's reading is 330 ~ 510 mV.

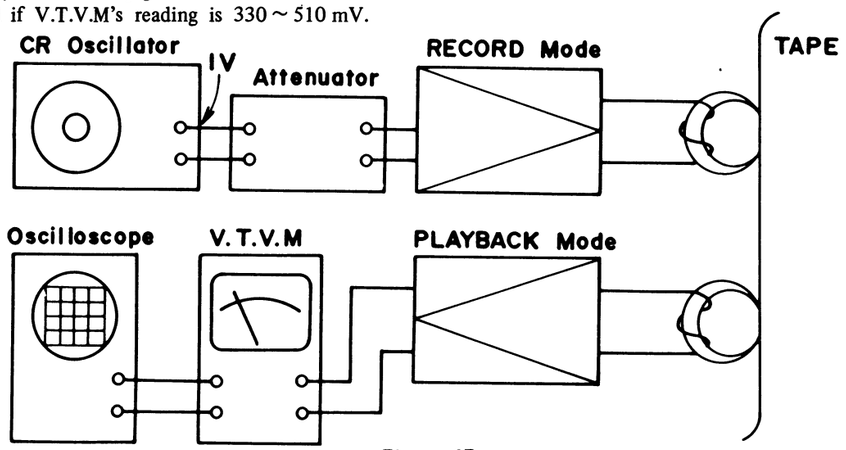


Figure 15

DOLBY NOISE REDUCTION CIRCUIT CHECK (Refer to Figure 16)

1) Connect the V.T.V.M. to the test point (TP102, TP202) and earth.
2) Set Dolby NR switch (SW5) in the on position, and input selector switch (SW4) in the line input position.
3) Insert the tape.
4) With the unit set at record mode, give it signal of –35 dB, 100 Hz from line input jacks (J3A, J3B) and adjust record level control (VR102, VR202) so that the V.T.V.M. reads 32.6 mV.
5) Give the unit 1 kHz signal, 10 kHz signal and 12.5 kHz signal in the order and if the V.T.V.M. reads as tabulated below with each input signal, it is normal.

Frequency	1 kHz	10 kHz	12.5 kHz
V.T.V.M. reads	45.7 ~ 81 mV	44.5 ~ 70 mV	42.6 ~ 68.2 mV

6) Give the unit signal of –50 dB, 100 Hz and adjust record level control (VR102, VR202) so that the V.T.V.M. reads 5.8mV.
7) In the same manner as in the step 5 above, give the unit 1kHz signal, 10 kHz signal and 12.5 kHz signal in the order and if the V.T.V.M. reads as tabulated below with each input signal, it is normal.

Frequency	1 kHz	10 kHz	12.5 kHz
V.T.V.M. reads	8.2 ~ 16.4 mV	13.7 ~ 24.9 mV	13.5 ~ 23.4 mV

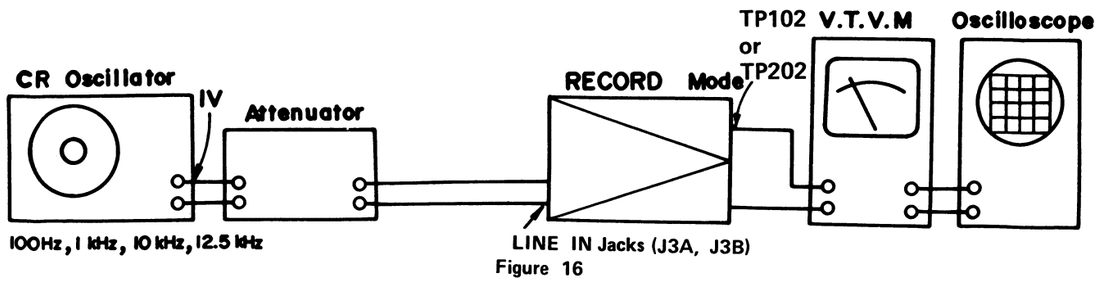


Figure 16

CIRCUIT DESCRIPTION

DOLBY NOISE REDUCTION SYSTEM

The construction of Dolby NR circuit is as shown below.

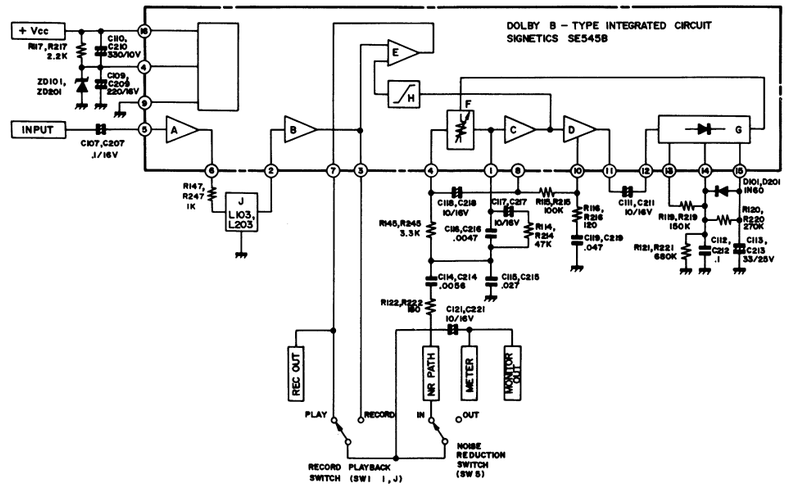


Figure 17

The amplifier circuits (A) and (B) are ordinary type. But the Dolby Summing (E) is an amplifier circuit that inverses only the polarity, having the gain of 1. Dolby Side Chain (F, C, D, G) is high-speed limiter that operate on high- or medium frequency.
The Fig. 18 shows the input/output characteristic curve of the Dolby Side Chain circuit and the curve varies according to the change of frequency.
The frequency characteristic is as shown in Fig. 19 and it is the same as that of the high-pass filter of 6 dB/octave. The turnover frequency of the curve also varies according to the change of input level.

If the output signal from Dolby Side Chain circuit shown in Fig. 18 or 19 and ordinary signal from the amplifier circuit (B) are supplied to the Dolby Summing (E) circuit, these two signals are added to the each other in the record mode showing a compressor characteristic while they are subtracted from the each other in play mode showing an expander characteristic – the input/output characteristic shown in Fig. 20 is obtained at Rec. Amp. terminal.

Dolby Side Chain Circuit

The characteristic of the high-pass filter of 6 dB/octave shown in Fig. 19 is obtained by that the composite impedances with C114 (C214), C115 (C215), C116 (C216),R122 (R222), R145 (R245) and R114 (R214), and the filter impedance are added to the each other to form an attenuator. The input/output characteristic in Fig. 18 is obtained by that DC voltage in proportion to the input is fed back to the attenuator (F). The circuit (C) increases the output of the attenuator to the specified voltage to supply the output to the Dolby Summing Circuit. The circuit (D, G) generates DC voltage and it also controls attack time and recovery time of the limiter.
Simultaneously, AC signal is applied to DC voltage to become NF signal being fed to the circuit (F), in order to reduce the distortion. The Fig. 21 represents all the blocks composing of the Dolby Side Chain circuit and shows how they are operating.

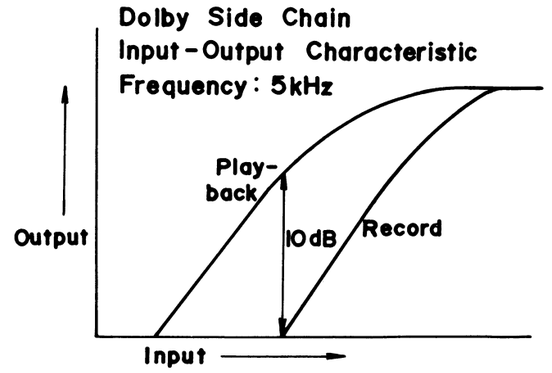


Figure 18

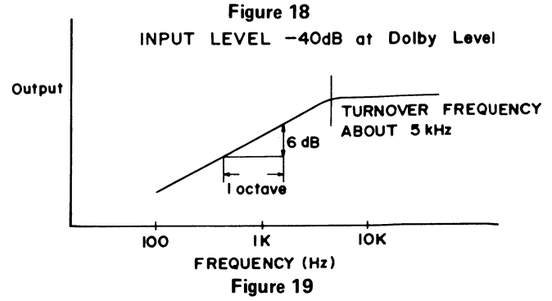


Figure 19

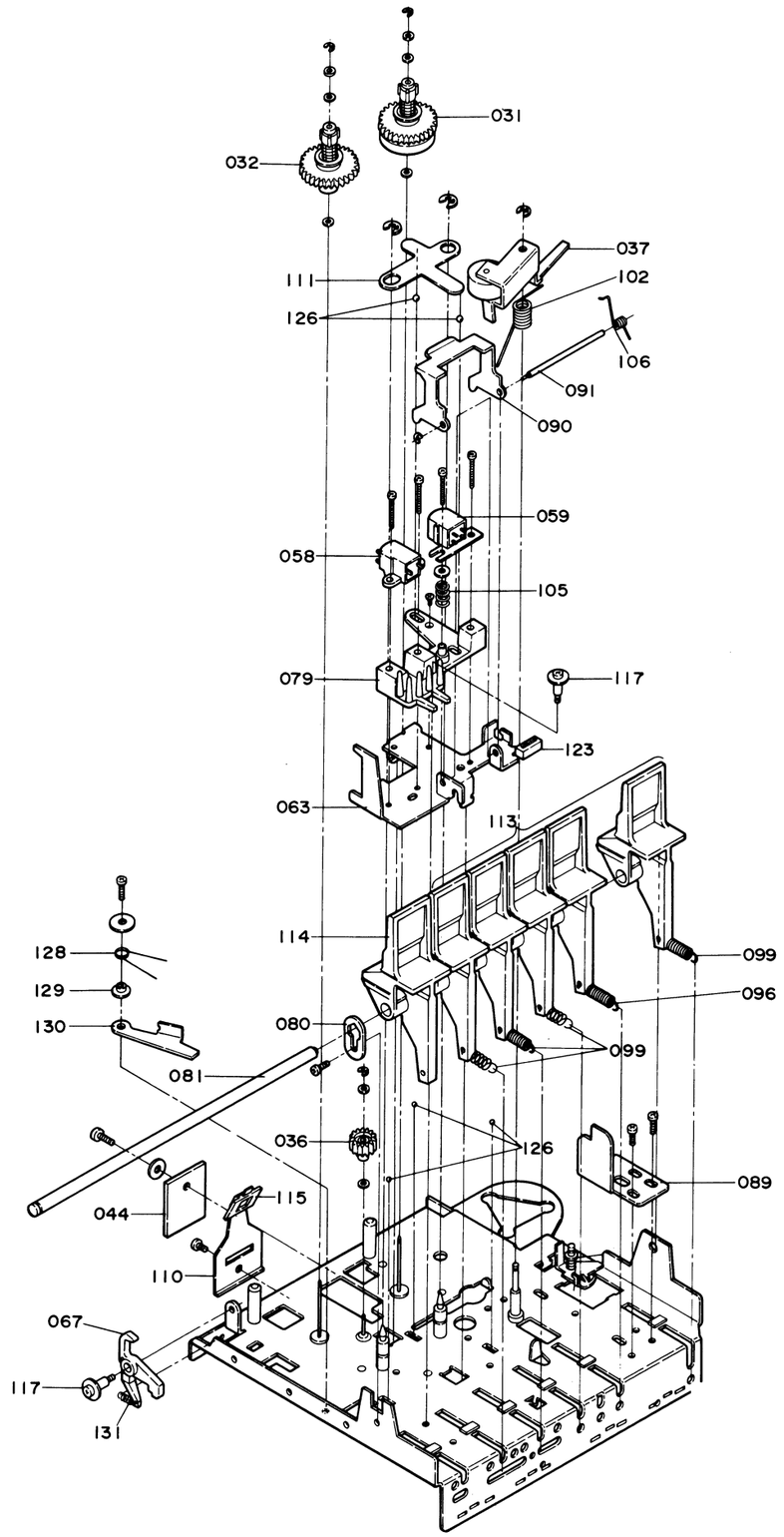


Figure 24 MECHANISM EXPLODED TOP VIEW

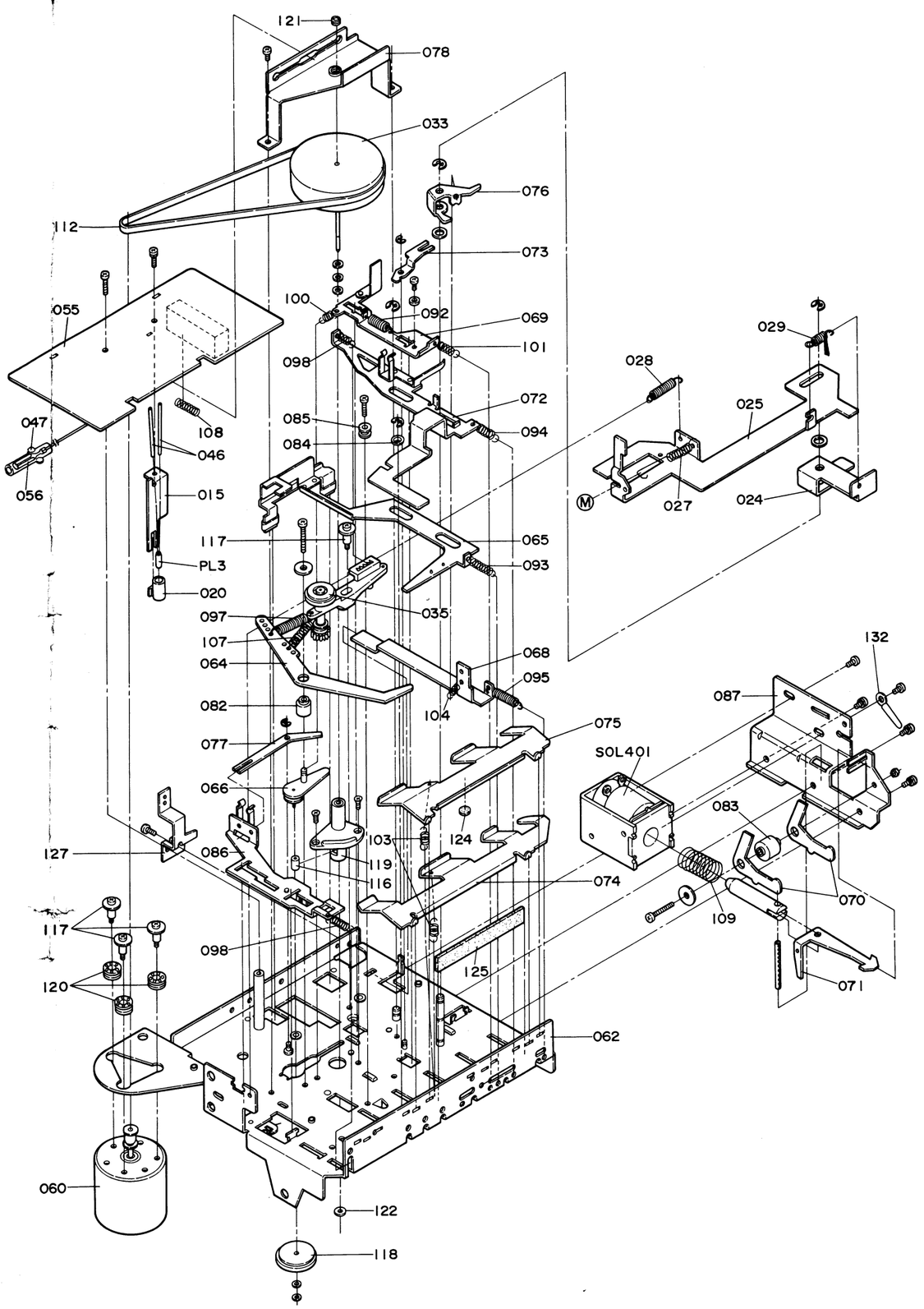
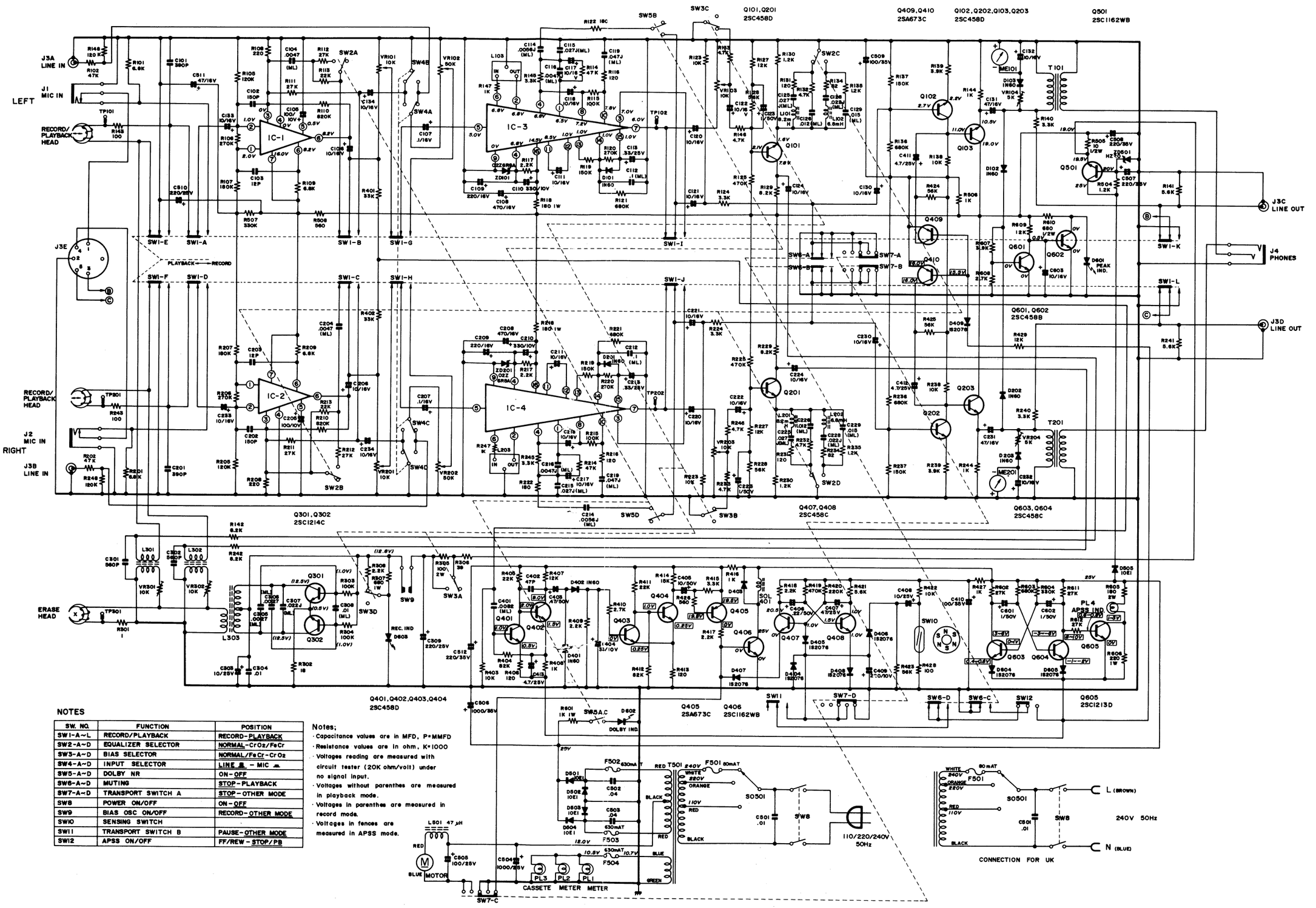


Figure 25 MECHANISM EXPLODED BOTTOM VIEW



NOTES

SW. NO.	FUNCTION	POSITION
SW1-A~L	RECORD/PLAYBACK	RECORD-PLAYBACK
SW2-A~D	EQUALIZER SELECTOR	NORMAL-CrO2/FeCr
SW3-A~D	BIAS SELECTOR	NORMAL/FeCr-CrO2
SW4-A~D	INPUT SELECTOR	LINE - MIC
SW5-A~D	DOLBY NR	ON-OFF
SW6-A~D	MUTING	STOP-PLAYBACK
SW7-A~D	TRANSPORT SWITCH A	STOP-OTHER MODE
SW8	POWER ON/OFF	ON-OFF
SW9	BIAS OSC ON/OFF	RECORD-OTHER MODE
SW10	SENSING SWITCH	
SW11	TRANSPORT SWITCH B	PAUSE-OTHER MODE
SW12	APSS ON/OFF	FF/REW-STOP/PB

Notes;
- Capacitance values are in MFD, P=MMFD
- Resistance values are in ohm, K=1000
- Voltages reading are measured with circuit tester (20K ohm/volt) under no signal input.
- Voltages without parenthes are measured in playback mode.
- Voltages in parenthes are measured in record mode.
- Voltages in fences are measured in APSS mode.

(Specifications or wiring diagrams of this model are subject to change for the improvement without prior notice.)

Figure 26 SCHEMATIC DIAGRAM

Mains supply cord	Bushing	Wire Color(L)	Wire Color(W)
QACCV0001AGZZ	LBSHC0004AGZZ	Black	Blue
QACCL0001AFZZ	LBSHC0007AFZZ	Dark gray	Dark gray
QACCZ0002TA0F	LBSHC0007AFZZ	Brown	Brown
QACCB0052AF09 (Without plug)	LBSHC0002AGZZ	Brown	Blue
QACCZ0002AG08 (QPLGA020AGZZ)	LBSHC0007AFZZ	Gray	Gray

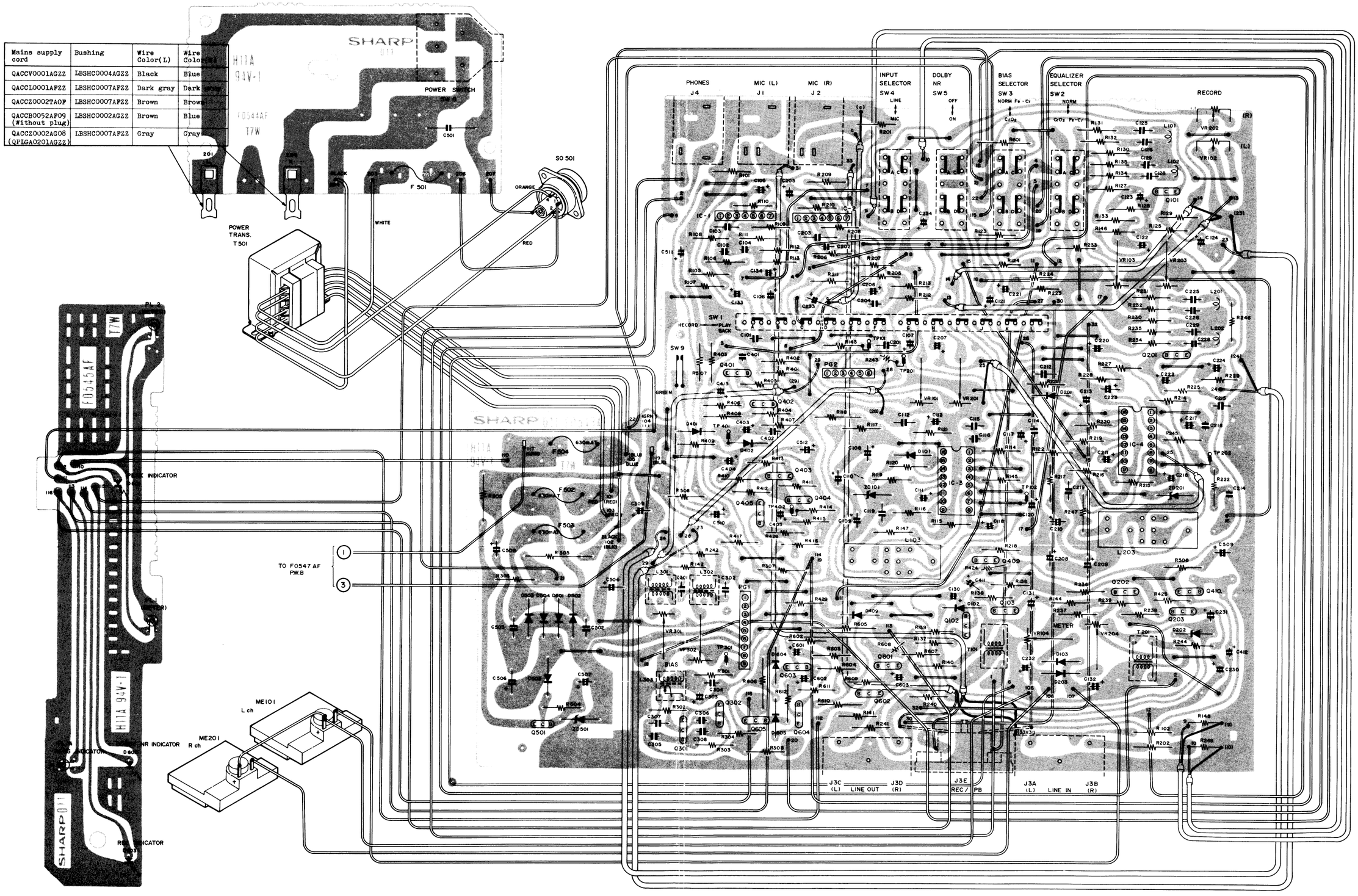


Figure 27 PRINTED CIRCUIT BOARD WIRING SIDE (1/2)

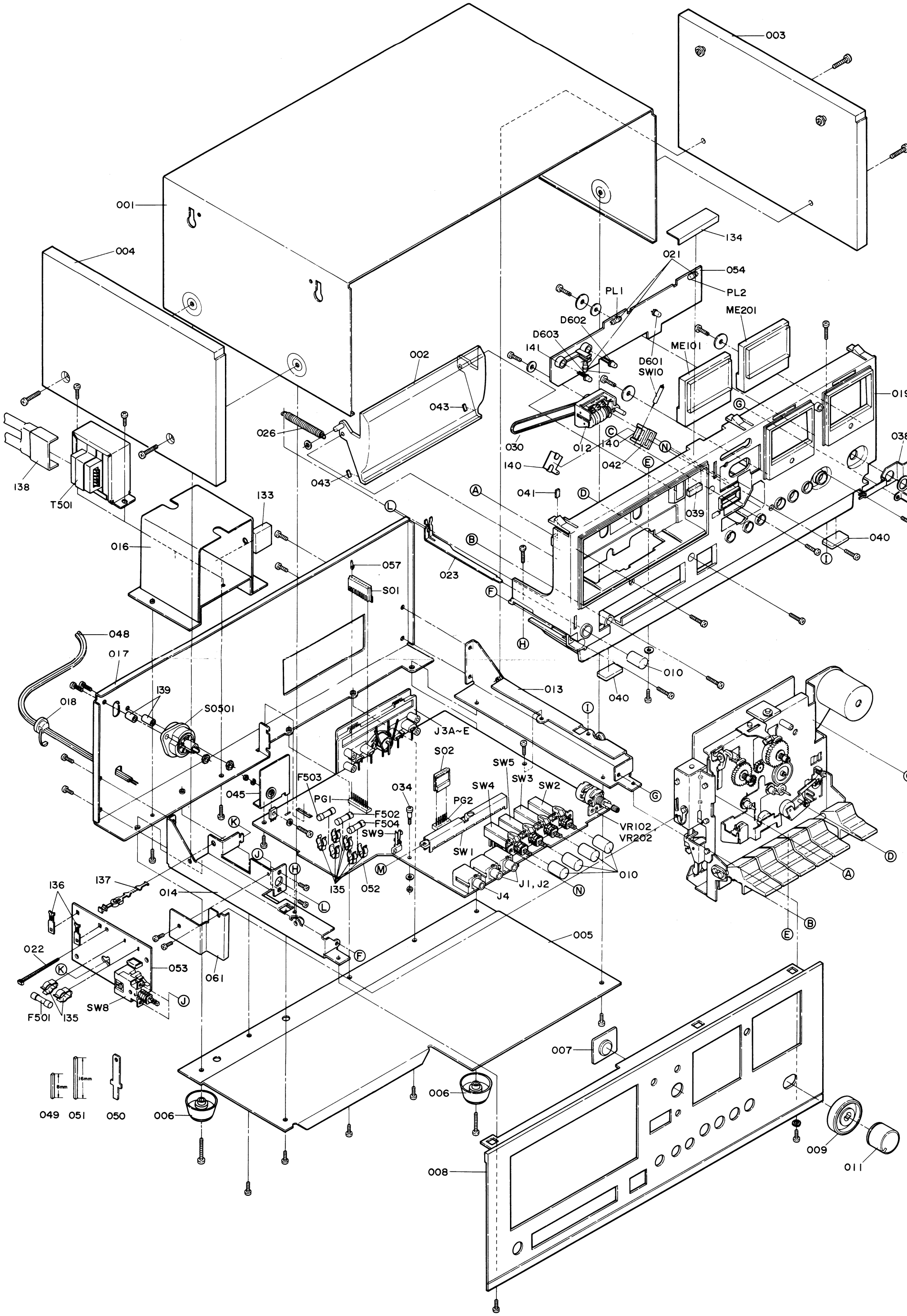


Figure 28 CABINET EXPLODED VIEW

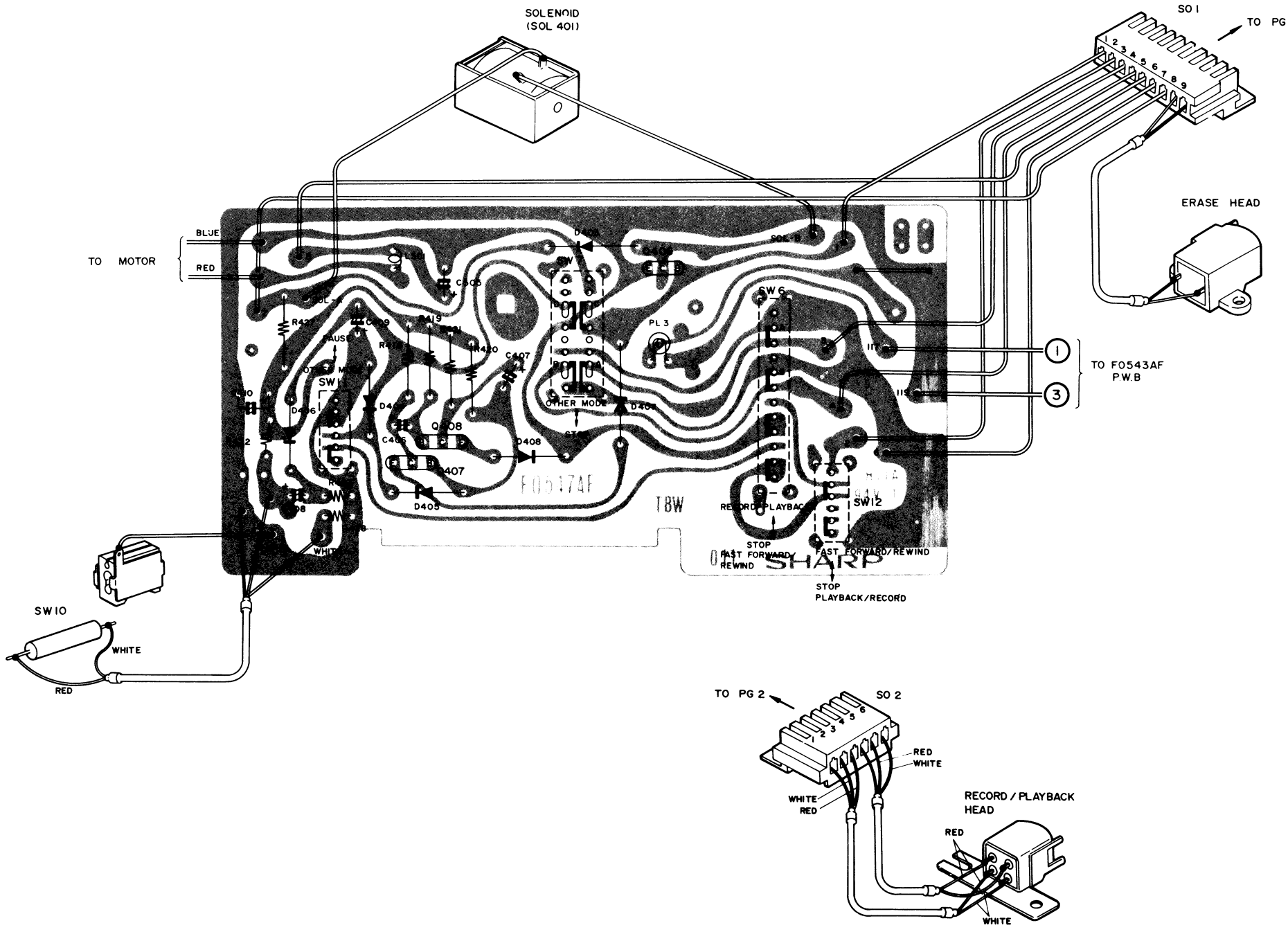
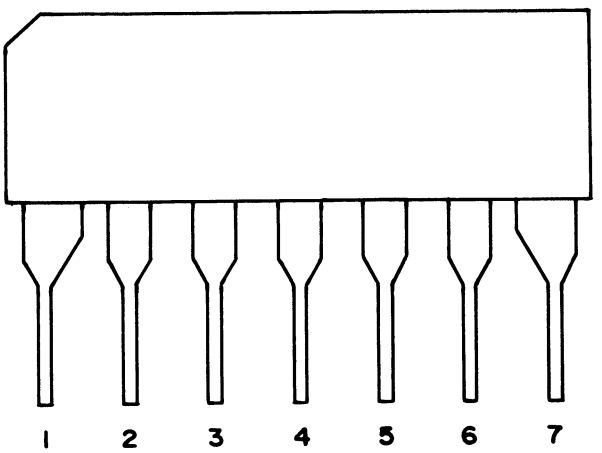


Figure 29 PRINTED CIRCUIT BOARD WIRING SIDE (2/2)

IC1, IC2 RH-IX0437AGZZ



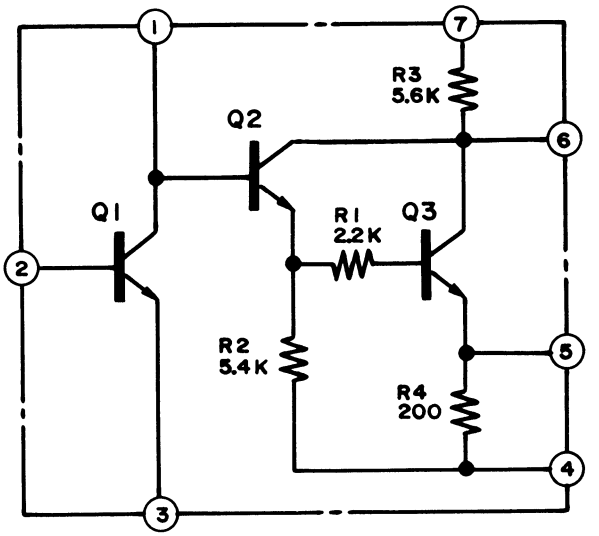


Figure 30

REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

CAPACITORS

REF. NO.	PART NO.	DESCRIPTION	CODE
C101, C201	VCCSPU1HL391K	390PF, 50V, ±10%, Ceramic	AB
C102, C202	VCCSPU1HL151K	150PF, 50V, ±10%, Ceramic	AA
C103, C203	VCCSPU1HL120K	12PF, 50V, ±10%, Ceramic	AA
C104, C204	VCQYKU1HM472J	.0047MFD, 50V, ±5%, Mylar	AC
C105, C205	VCEAAU1AW107Y	100MFD, 10V, +50 −10%, Electrolytic	AB
C106, C206	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C107, C207	VCEALU1CW104M	.1MFD, 16V, ±20%, Electrolytic	AB
C108, C208	VCEAAU1CW477Y	470MFD, 16V, +50 −10%, Electrolytic	AD
C109, C209	VCEAAU1CW227Y	220MFD, 16V, +50 −10%, Electrolytic	AC
C110, C210	VCEAAU1AW337Q	330MFD, 10V, +100 −10%, Electrolytic	AD
C111, C211	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C112, C212	VCQYKU1HM104K	.1MFD, 50V, ±10%, Mylar	AC
C113, C213	VCAAAU1EB334K	.33MFD, 25V, ±10%, Electrolytic	AC
C114, C214	VCQYKU1HM562J	.0056MFD, 50V, ±5%, Mylar	AC
C115, C215	VCQYKU1HM273J	.027MFD, 50V, ±5%, Mylar	AC
C116, C216	VCQYKU1HM472J	.0047MFD, 50V, ±5%, Mylar	AC
C117, C217	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C118, C218	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C119, C219	VCQYKU1HM473J	.047MFD, 50V, ±5%, Mylar	AC
C120, C220	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C121, C221	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C122, C222	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C123, C223	VCEAAU1HW105Y	1MFD, 50V, +50 −10%, Electrolytic	AB
C124, C224	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C125, C225	VCQYKU1HM273J	.027MFD, 50V, ±5%, Mylar	AC
C126, C226	VCQYKU1HM123K	.012MFD, 50V, ±10%, Mylar	AB
C128, C228	VCQYKU1HM223J	.022MFD, 50V, ±5%, Mylar	AC
C129, C229	VCQYKU1HM153K	.015MFD, 50V, ±10%, Mylar	AB
C130, C230	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C131, C231	VCEAAU1CW476Y	47MFD, 16V, +50 −10%, Electrolytic	AC
C132, C232	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C133, C233	VCEALU1CC106Y	10MFD, 16V, +50 −10%, Electrolytic	AC
C134, C234	VCEAAU1CW106Y	10MFD, 16V, +50 −10%, Electrolytic	AB
C301	VCCSPU1HL561K	560PF, 50V, ±10%, Ceramic	AA
C302	VCCSPU1HL561K	560PF, 50V, ±10%, Ceramic	AA
C303	VCEAAU1EW106Y	10MFD, 25V, +50 −10%, Electrolytic	AB
C304	VCKZPU1EF103Z	.01MFD, 25V, +80 −20%, Ceramic	AC
C305	VCQYKU1HM272K	.0027MFD, 50V, ±10%, Mylar	AB
C306	VCQYKU1HM272K	.0027MFD, 50V, ±10%, Mylar	AB
C307	VCQYKU1HM223J	.022MFD, 50V, ±5%, Mylar	AC
C308	VCQYKU1HM103K	.01MFD, 50V, ±10%, Mylar	AB
C309	VCEAAU1EW227Y	220MFD, 25V, +50 −10%, Electrolytic	AC
C401	VCQYKU1HM822K	.0082MFD, 50V, +10 −10%, Mylar	AB
C402	VCCSPU1HL470K	47PF, 50V, ±10%, Ceramic	AA
C403	VCEALU1HW474M	.47MFD, 50V, +20 −20%, Electrolytic	AB
C404	VCEAAU1AW336Y	33MFD, 10V, +50 −10%, Electrolytic	AB
C405	VCEAAU1HW106Y	10MFD, 50V, +50 −10%, Electrolytic	AC
C406	VCEALU1HW224M	.22MFD, 50V, ±20%, Electrolytic	AB
C407	VCEAAU1EW476Y	47MFD, 25V, +50 −10%, Electrolytic	AC
C408	VCEAAU1EW106Y	10MFD, 25V, +50 −10%, Electrolytic	AB
C409	VCEAAU1AW227Y	220MFD, 10V, +50 −10%, Electrolytic	AC
C410	VCEAAU1VW107Y	100MFD, 35V, +50 −10%, Electrolytic	AD
C411	VCEAAU1EW475A	4.7MFD, 25V, +75−10%, Electrolytic	AB

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
C412	VCEAAU1EW475A	4.7MFD, 25V, +75–10%, Electrolytic	AB
C413	VCEAAU1EW475A	4.7MFD, 25V, +75–10%, Electrolytic	AB
C501	RC-HZ053CAFZZ	.01MFD, 250V, ±20%, Metallized Paper	AG
C502	VCKZPU1HF403Z	.04MFD, 50V, +80–20%, Ceramic	AB
C503	VCKZPU1HF403Z	.04MFD, 50V, +80–20%, Ceramic	AB
C504	VCEAAU1EW108Y	1000MFD, 25V, +50–10%, Electrolytic	AF
C505	VCEAAU1EW107Y	100MFD, 25V, +50–10%, Electrolytic	AC
C506	VCEAAU1VW108Y	1000MFD, 35V, +50–10%, Electrolytic	AG
C507	VCEAAU1VW227Y	220MFD, 35V, +50–10%, Electrolytic	AD
C508	VCEAAU1VW227Y	220MFD, 35V, +50–10%, Electrolytic	AD
C509	VCEAAU1VW107Y	100MFD, 35V, +50–10%, Electrolytic	AD
C510	VCEAAU1EW227Y	220MFD, 25V, +50–10%, Electrolytic	AC
C511	VCEAAU1CW476Y	47MFD, 16V, +50–10%, Electrolytic	AC
C512	VCEAAU1VW227Y	220MFD, 35V, +50–10%, Electrolytic	AD
C601	VCEALU1HW105M	1MFD, 50V, ±20%, Electrolytic	AD
C602	VCEALU1HW105M	1MFD, 50V, ±20%, Electrolytic	AD
C603	VCEAAU1CW106Y	10MFD, 16V, +50–10%, Electrolytic	AB

RESISTORS

(Unless otherwise specified resistors are 1/4W, ±5%, Carbon Type.)

R101, R201	VRD-ST2EE682J	6.8K ohm	AA
R102, R202	VRD-ST2EE473J	47K ohm	AA
R105, R205	VRD-ST2EE124J	120K ohm	AA
R106, R206	VRD-ST2EE274J	270K ohm	AA
R107, R207	VRD-ST2EE184J	180K ohm	AA
R108, R208	VRD-ST2EE221J	220 ohm	AA
R109, R209	VRD-ST2EE682J	6.8K ohm	AA
R110, R210	VRD-ST2EE824J	820K ohm	AA
R111, R211	VRD-ST2EE273J	27K ohm	AA
R112, R212	VRD-ST2EE273J	27K ohm	AA
R113, R213	VRD-ST2EE223J	22K ohm	AA
R114, R214	VRD-ST2EE473J	47K ohm	AA
R115, R215	VRD-ST2EE104J	100K ohm	AA
R116, R216	VRD-ST2EE121J	120 ohm	AA
R117, R217	VRD-ST2EE222J	2.2K ohm	AA
R118, R218	VRS-PT3AB181K	180 ohm, 1W, ±10%, Oxide Film	AB
R119, R219	VRD-ST2EE154J	150K ohm	AA
R120, R220	VRD-ST2EE274J	270K ohm	AA
R121, R221	VRD-ST2EE684J	680K ohm	AA
R122, R222	VRD-ST2EE181J	180 ohm	AA
R123, R223	VRD-ST2EE103J	10K ohm	AA
R124, R224	VRD-ST2EE332J	3.3K ohm	AA
R125, R225	VRD-ST2EE474J	470K ohm	AA
R127, R227	VRD-ST2EE123J	12K ohm	AA
R128, R228	VRD-ST2EE563J	56K ohm	AA
R129, R229	VRD-ST2EE822J	8.2K ohm	AA
R130, R230	VRD-ST2EE122J	1.2K ohm	AA
R131, R231	VRD-ST2EE121J	120 ohm	AA
R132, R232	VRD-ST2EE472J	4.7K ohm	AA
R133, R233	VRD-ST2EE472J	4.7K ohm	AA
R134, R234	VRD-ST2EE820J	82 ohm	AA
R135, R235	VRD-ST2EE122J	1.2K ohm	AA
R136, R236	VRD-ST2EE684J	680K ohm	AA
R137, R237	VRD-ST2EE154J	150K ohm	AA
R138, R238	VRD-ST2EE103J	10K ohm	AA
R139, R239	VRD-ST2EE392J	3.9K ohm	AA
R140, R240	VRD-ST2EE332J	3.3K ohm	AA
R141, R241	VRD-ST2EE562J	5.6K ohm	AA
R142, R242	VRD-ST2EE822J	8.2K ohm	AA
R143	VRD-ST2EE101J	100 ohm	AA
R243	VRD-SU2EY101J	100 ohm	AA

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
R144, R244	VRD-ST2EE102J	1K ohm	AA
R145, R245	VRD-ST2EE332J	3.3K ohm	AA
R146, R246	VRD-ST2EE472J	4.7K ohm	AA
R147, R247	VRD-ST2EE102J	1K ohm	AA
R301	VRD-ST2EE1R0J	1 ohm	AA
R302	VRD-ST2EE180J	18 ohm	AA
R303	VRD-ST2EE104J	100K ohm	AA
R304	VRD-ST2EE104J	100K ohm	AA
R305	VRS-PT3DB101K	100 ohm, 2W, ±10%, Oxide Film	AB
R306	RR-XZ0001AFZZ	39 ohm, 1/4W, ±5%, Fusible	AB
R307	VRS-PT3AB681K	680 ohm, 1W, ±10%, Oxide Film	AB
R308	VRD-ST2EE222J	2.2K ohm	AA
R401	VRD-ST2EE333J	33K ohm	AA
R402	VRD-ST2EE333J	33K ohm	AA
R403	VRD-ST2EE103J	10K ohm	AA
R404	VRD-ST2EE823J	82K ohm	AA
R405	VRD-ST2EE223J	22K ohm	AA
R406	VRD-ST2EE121J	120 ohm	AA
R407	VRD-ST2EE123J	12K ohm	AA
R408	VRD-ST2EE102J	1K ohm	AA
R409	VRD-ST2EE222J	2.2K ohm	AA
R410	VRD-ST2EE272J	2.7K ohm	AA
R411	VRD-ST2EE223J	22K ohm	AA
R412	VRD-ST2EE823J	82K ohm	AA
R413	VRD-ST2EE121J	120 ohm	AA
R414	VRD-ST2EE153J	15K ohm	AA
R415	VRD-ST2EE332J	3.3K ohm	AA
R416	VRD-ST2EE102J	1K ohm	AA
R417	VRD-ST2EE222J	2.2K ohm	AA
R418	VRD-ST2EY222J	2.2K ohm	AA
R419	VRD-ST2EY474J	470K ohm	AA
R420	VRD-ST2EY224J	220K ohm	AA
R421	VRD-ST2EY562J	5.6K ohm	AA
R422	VRD-SU2EY103J	10K ohm	AA
R423	VRD-SU2EY563J	56K ohm	AA
R424	VRD-SU2EY563J	56K ohm	AA
R425	VRD-ST2EE563J	56K ohm	AA
R426	VRD-ST2EE561J	560 ohm	AA
R427	VRD-ST2EY102J	1K ohm	AA
R428	VRD-SU2EY101J	100 ohm	AA
R429	VRD-ST2EE123J	12K ohm	AA
R504	VRD-ST2EE122J	1.2K ohm	AA
R505	RR-XZ0001AGZZ	10 ohm, 1/2W, ±5%, Fusible	AB
R506	VRD-ST2EE102J	1K ohm	AA
R507	VRD-ST2EE334J	330K ohm	AA
R508	VRD-ST2EE561J	560 ohm	AA
R601	VRS-PT3AB102K	1K ohm, 1W, ±10%, Oxide Film	AB
R602	VRD-ST2EE273J	27K ohm	AA
R603	VRD-ST2EE684J	680K ohm	AA
R604	VRD-ST2EE334J	330K ohm	AA
R605	VRS-PT3DB181K	180 ohm, 2W, ±10%, Oxide Film	AB
R606	VRS-PT3AB221K	220 ohm, 1W, ±10%, Oxide Film	AB
R607	VRD-ST2EE392J	3.9K ohm	AA
R608	VRD-SU2EY272J	2.7K ohm	AA
R609	VRD-ST2EE123J	12K ohm	AA
R610	VRC-MT2HG681K	680 ohm, 1/2W, ±10%, Oxide Film	AA
R611	VRD-ST2EE273J	27K ohm	AA
R612	VRD-ST2EE273J	27K ohm	AA
R148, R248	VRD-SU2EY124J	120K ohm	AA

DIODES

D101, D201	VHD1N60////-1	Switching	AB
D102, D202	VHD1N60////-1	Peak Indicating Circuit	AB
D103, D203	VHD1N60////-1	Meter Rectifier	AB
D401	VHD1N60////-1	Rectifier	AB
D402	VHD1N60////-1	Rectifier	AB
D403	RH-DX1006AFZZ	Surge Absorber	AC
D404	VHD1S2076//-1	Voltage Control	AB
D405	VHD1S2076//-1	Voltage Control	AB
D406	VHD1S2076//-1	Pulse Detector	AB
D407	VHD1S2076//-1	Transistor Protection	AB
D408	VHD1S2076//-1	Transistor Protection	AB
D409	VHD1S2076//-1	Overload	AB
D501, D502, D503, D504	VHD10E1////-1	Rectifier	AC
D505	VHD10E1////-1	Rectifier	AC
D601	VHPGL-52AR/1F	L.E.D., PEAK Indicator	AC
D602	VHPGL-52AR/1F	L.E.D., DOLBY NR Indicator	AC
D603	VHPGL-52AR/1F	L.E.D., Record Indicator	AC
D604, D605	VHD1S2076//-1	Transistor Protection	AB
ZD101, ZD201	VHE02Z6R8A/-1	Constant Voltage	AE
ZD501	VHEHZ20////-1	Constant Voltage	AD

TRANSISTORS

Q101, Q201	VS2SC458-D/-1	Record Amp.	AF
Q102, Q202	VS2SC458-D/-1	Meter Amp.	AF
Q103, Q203	VS2SC458-D/-1	Meter Amp.	AF
Q301, Q302	VS2SC1214-C-1	Bias Oscillator	AF
Q401	VS2SC458-D/-1	APSS Limitter Amp.	AF
Q402	VS2SC458-D/-1	APSS Limitter Amp.	AF
Q403	VS2SC458-D/-1	Level Comparison	AF
Q404	VS2SC458-D/-1	Level Comparison	AF
Q405	VS2SA673-C/-1	Differential Circuit	AE
Q406	VS2SC1162WB-3	Solenoid Switching	AG
Q407	VS2SC458-C/-1	Multivibrator, Auto Stop Circuit	AF
Q408	VS2SC458-C/-1	Multivibrator, Auto Stop Circuit	AF
Q409	VS2SA673-C/-1	APSS Muting	AE
Q410	VS2SA673-C/-1	APSS Muting	AE
Q501	VS2SC1162WB-3	Ripple Filter	AG
Q601	VS2SC458-B/-1	Peak Indicator Amp.	AF
Q602	VS2SC458-B/-1	Peak Indicator Amp.	AF
Q603	VS2SC458-C/-1	Multivibrator, APSS Indicator	AF
Q604	VS2SC458-C/-1	Multivibrator, APSS Indicator	AF
Q605	VS2SC1213-D-1	APSS Indicator Switching	AE

INTEGRATED CIRCUIT

IC1, IC2	RH-IX0437AGZZ	Audio Amp.	AH
IC3, IC4	RH-IX0431AGZZ	Dolby Noise Reduction Circuit	AY

COILS

L101, L201	RCILZ0016AGZZ	8.2mH, Record Equalizer	AD
L102, L202	RCILZ0019AGZZ	6.8mH, Record Equalizer	AD
L103, L203	RCILL0052AFZZ	19KHz Low Pass Filter	AL
L301, L302	RCILB0376AFZZ	Bias Step-up	AE
L303	RCILB0086AGZZ	Bias Oscillator	AF
L501	RCILF0014AGZZ	47μH, Choke	AC

TRANSFORMERS

T101, T201	RTRNS0027AGZZ	Headphone Output	AE
T501	RTRNP0454AFZZ	Power	AZ

CONTROLS

VR101, VR201	RVR-M0046AGZZ	10K ohm (B), Playback Sensitivity Adjust	AD
VR102, VR202	RVR-A0117AFZZ	50K ohm (A), Record Level Control	AN
VR103, VR203	RVR-M0046AGZZ	10K ohm (B), Record Sensitivity Adjust	AD
VR104, VR204	RVR-M0062AGZZ	5K ohm (B), Meter Sensitivity Adjust	AC
VR301, VR302	RVR-M0046AGZZ	10K ohm (B), Bias Current Adjust	AD

PICTORIAL PARTS

001	GCAB-3025AFSA	Cabinet	AT
002	GDORF3053AFSA	Door, Cassette Chamber	AG
003	GITAS0013AFSB	Decoration Plate, Right Hand Side	AP
004	GITAS0014AFSB	Decoration Plate, Left Hand Side	AP
005	GITAU0005AFZZ	Lid, Bottom	AK
006	GLEGP0053AF00	Leg	AC
007	HDECQ0056AFSA	Decoration, APSS Indicator	AE
008	HPNLC3261AFSA	Panel, Front	AY
009	JKNBK0159AFSA	Knob, RECORD (Right)	AK
010	JKNBM1004SESF	Knob, POWER/INPUT/ DOLBY NR/BIAS/EQ	AE
011	JKNBN0325AFSA	Knob, RECORD (Left)	AG
012	KCOUB0060AFZZ	Counter	AM
013	LANGJ0052AFZZ	Bracket, Right Hand Side	AD
014	LANGJ0055AFZZ	Bracket, Left Hand Side	AE
015	LANGQ0490AFZZ	Bracket, Tape Illumination Lamp	AB
016	LANGR0404AFZZ	Bracket, Power Transformer	AH
017	LANGT0572AFSA	Bracket, Terminal, Rear	AM
018	LBSHC0007AFZZ	Bushing, Mains Supply	AB
	LBSHC0002AGZZ	Cord	AB
	LBSHC0004AGZZ		AB
019	LCHSZ0053AFSA	Frame, Front	AR
020	LHLDP3017AF00	Holder, Tape Illumination Lamp	AC
021	LHLDP3053AFFW	Holder, REC/DOLBY NR/ APSS Indicator	AA
022	LHLDW1054AFZZ	Wire Holder	AA
023	MLEVF0602AFZZ	Lever, POWER Switch	AB
024	MLEVF0603AFZZ	Lever, Record/Playback Switch	AB
025	MLEVF0604AFZZ	Lever, Record/Playback Switch	AD
026	MSPRT0378AFFJ	Spring, Cassette Compartment Door	AB
027	MSPRT0379AFFJ	Spring, Record/Playback Switch	AA
028	MSPRT0380AFFJ	Spring, Record/Playback Switch Lever	AA
029	MSPRT0384AFFJ	Spring, Record/Playback Switch Lever	AA
030	NBLTK0107AFZZ	Belt, Counter	AC
031	NDAIR0114AFSA	Turntable, Take-up	AG
032	NDAIR0115AFSA	Turntable, Supply	AE
033	NFLYC0051AFZZ	Flywheel	AK
034	NPLYC0101AFFD	Boss, Protective	AA
035	NROLV0006AFZZ	Roller, Fast Forward/Rewind	AH
036	NROLX0003AFZZ	Gear, Rewind	AB
037	NROLY0001AFZZ	Pressure Roller Assembly	AG
038	LANGQ0497AFZZ	Bracket, RECORD Control	AC
039	PCUSU0213AFZZ	Cushion, Cassette Compartment	AA

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
040	PFLT-0276AFZZ	Felt, Leg	AA
041	PGUMM0104AF00	Cushion, Rubber, 3 x 8 x 2 mm	AA
042	PGUMM0105AF00	Holder, Reed Switch	AD
043	PGUMS0103AF00	Cushion, Rubber, 2 x 8 x 0.8 mm	AA
044	PGUMS0104AF00	Cushion, Rubber, Cassette Compartment Door	AA
045	PRDAR0130AFZZ	Heatsink, Transistor (Q501)	AB
046	PSPAV0054AFZZ	Spacer, Tape Illumination Lamp	AA
047	PZETV0007TAZZ	Cover, Tip	AA
048	QACCZ0002AG08		AF
	QACCB0052AF09		AM
	QACCL0001AFZZ	Mains Supply Cord	AQ
	QACCV0001AGZZ		AN
	QACCZ0002TAOF		AF
049	QLUGP0111CEFW	Lug Terminal	AA
050	QLUGP0150AFZZ	Lug Terminal	AA
051	QLUGP9050AFFW	Lug Terminal	AA
052	QPWBF0543AFZZ	Printed Wiring Board, Record/Playback Amp.	AS
053	QPWBF0544AFZZ	Printed Wiring Board, POWER Switch	AE
054	QPWBF0545AFZZ	Printed Wiring Board, Indicator Lamp	AE
055	QPWBF0547AFZZ	Printed Wiring Board, Mechanism	AF
056	QTIPF0001CEYW	Tip, Wiring	AA
057	QTIPZ0055AFZZ	Tip, Connector	AA
058	RHEDA0056AFZZ	Head, Erase	AH
059	RHEDH0055AFZZ	Head, Record/Playback	AX
060	RMOTV0056AFZZ	Motor	AW
061	LANGH0109AFZZ	Bracket, Mechanism	AD
062	LCHSM0247AFZZ	Mechanism Mounting Plate	AT
063	LCHSS0115AFFP	Sub-chassis	AF
064	MLEVF0647AFFD	Lever, Fast Forward	AB
065	MLEVF0632AFZZ	Lever, Brake	AF
066	MLEVP0031AGZZ	Lever, Take-up Idler	AD
067	MLEVP0080AFZZ	Lever, Record Safety	AC
068	MLEVF0665AFFW	Lever, Record	AC
069	MLEVF0633AFZZ	Lever, Muting Switch	AD
070	MLEVF0634AFFD	Lever, Lock Lever Release	AC
071	MLEVF0635AFFW	Lever, Solenoid	AD
072	MLEVF0636AFZZ	Lever, APSS Function	AF
073	MLEVF0637AFFD	Lever, Sub-chassis Return	AB
074	MLEVF0640AFFN	Lever, Playback/Record Button Lock	AE
075	MLEVF0641AFFN	Lever, Fast Forward/Rewind Button Lock	AD
076	MLEVF0638AFFW	Lever, APSS Safety	AC
077	MLEVF0514AFFW	Lever, Take-up Idler	AB
078	LANGT0547AFFW	Bracket, Flywheel	AD
079	LDAIH0051AFZZ	Block, Head Mounting	AD
080	LSTPF0052AFFW	Retainer, Function Button Shaft	AB
081	NSFTZ0056AFFD	Shaft, Function Button	AF
082	PGIDS0001AGFW	Pivot, Fast Forward Lever	AB
083	LSLVM0058AFFW	Sleeve, Lock Lever Release Lever	AC
084	LSLVM0061AFFW	Sleeve, APSS Function Lever	AB
085	LSLVM0062AFFW	Sleeve, APSS Function Lever	AB
086	MLEVF0644AFZZ	Lever, Pause Function	AE
087	LANGT0568AFFW	Bracket, Solenoid Retaining	AD
089	LANGF0369AFZZ	Bracket, Function Button Shaft	AC
090	MLEVF0613AFFP	Lever, Cassette Retaining	AC
091	NSFTZ0058AFFD	Shaft, Cassette Retaining Lever	AB
092	MSPRT0400AFFJ	Spring, Muting Switch Lever	AA
093	MSPRT0401AFFJ	Spring, Brake Lever	AA
094	MSPRT0402AFFJ	Spring, APSS Function Lever	AA
095	MSPRT0253AGFJ	Spring, Record Lever	AA
096	MSPRT0254AGFJ	Spring, Stop Button	AA
097	MSPRT0405AFFJ	Spring, Fast Forward/Rewind Roller	AA
098	MSPRT0406AFFJ	Spring, Fast Forward/Rewind Roller	AA
099	MSPRT0266AGFJ	Spring, Function Button	AB
100	MSPRT0408AFFJ	Spring, Record Lever	AA
101	MSPRT0404AFFJ	Spring, Muting Switch Lever	AA
102	MSPRD0129AFFJ	Spring, Pressure Roller	AA
103	MSPRT0259AGFJ	Spring, Lock Lever	AA
104	MSPRT0403AFFJ	Spring, Record Safety Lever	AA
105	MSPRC0031AGMN	Spring, Record/Playback Head Azimuth	AA
106	MSPRD0136AFFJ	Spring, Cassette Retaining Lever	AB
107	MSPRT0416AFFJ	Spring, Fast Forward/Rewind Roller	AA
108	MSPRC0120AFFJ	Spring, Muting Switch	AA
109	MSPRC0123AFFJ	Spring, Solenoid Core	AA
110	MSPRP0137AFFW	Spring, Plate Type, Cassette Hold	AC
111	MSPRP0136AFFW	Spring, Sub-chassis Retaining	AC
112	NBLTH0050AFZZ	Belt, Drive	AD
113	JKNBR0102AFSA	Knob, Function	AF
114	JKNBR0102AFSB	Knob, Record Function	AF
115	MLEVP0078AF00	Lever, Cassette Hold	AB
116	NPLYR0050AF00	Pulley, Take-up	AC
117	LX-BZ0219AFFD	Screw, Motor Retaining	AD
118	NIDR-0021AGZZ	Idler, Take-up	AC
119	NBRGC0053AFZZ	Bearing, Capstan	AF
120	LBSHS0001AG00	Cushion, Motor	AA
121	LX-BZ0108AGZZ	Screw, Flywheel Thrust Adjust	AB
122	LX-WZ9051AFZZ	Washer, Capstan Oil Cut	AA
123	PCUSG0061AF00	Cushion, Sub-Chassis	AA
124	PFLT-0284AFZZ	Felt, Lock Lever	AA
125	PCUSS0077AFZZ	Cushion, Lock Lever	AA
126	NBALS0004AGFJ	Ball, ϕ3	AA
127	LANGF0382AFFW	Bracket, Mechanism Printed Wiring Board	AC
128	MSPRD0151AFFJ	Spring, Safety Lever	AA
129	LSLVM0063AFFW	Spacer, Safety Lever	AB
130	MLEVF0676AFFD	Lever, Safety	AB
131	MSPRT0430AFFJ	Spring, Record Safety Lever	AA
132	LHLDW9003CEZZ	Wire Holder	AA
133	PGUMS0106AF00	Cushion, Rubber, 20x20x6 mm	AB

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
134	LANGH0110AFZZ	Bracket, Front Frame	AC
PG2	QCNCM102FAFZZ	Plug, 6 Pin	AC
PG1	QCNCM105JAFZZ	Plug, 9 Pin	AD
SO2	QCNCW093FAFZZ	Socket, 6 Pin	AB
SO1	QCNCW096JAFZZ	Socket, 9 Pin	AC
J4	QJAKJ0055AFZZ	Jack, PHONES	AE
J1, J2	QJAKZ0062AFZZ	Jack, MIC	AE
J3A~E	QSOCZ2463AFZZ	Socket, LINE IN/LINE OUT/REC/PB	AK
SW9	QSW-F0116AFZZ	Switch, Bias	AE
SW10	QSW-L0051AFZZ	Switch, Reed Type	AH
SW8	QSW-P0119AFZZ	Switch, POWER	AL
SW2-A~D	QSW-P0138AFZZ	Switch, Equalizer Selector	AP
SW3-A~D		Switch, Bias Selector	
SW4-A~D		Switch, Input Selector	
SW5-A~D		Switch, Dolby NR	
SW6	QSW-S0174AFZZ	Switch, Muting	AG
SW7	QSW-S0185AFZZ	Switch, Auto Stop Main	AG
SW1-A~L	QSW-S0187AFZZ	Switch, Record/Playback	AH
SW11	QSW-S0188AFZZ	Switch, Auto Stop	AG
SW12	QSW-S0188AFZZ	Switch, APSS	AG
PL1, PL2	RLMPM0060AFZZ	Pilot Lamp, Meter Illumination	AC
PL3	RLMPM0060AFZZ	Pilot Lamp, Tape Illumination	AC
PL4	RLMPM0060AFZZ	Pilot Lamp, APSS Indicator	AC
ME101, ME201	RMTRL0127AFZZ	Meter, Record/Playback Level	AT
SOL401	RPLU-0060AFZZ	Solenoid, Auto Stop	AN
	QCNW-0139AFZZ	Connecting Cord	AQ
135	QFSHD1001AGZZ	Fuse Holder	AB
136	QTANZ0160AFZZ	Lug Terminal	AA
137	LHLDW1052AFZZ	Wire Holder	AA
138	PCOVW9105AFZZ	Cover, Transformers Lead Wire	AG
139	PSPAB0103AFFW	Spacer, Voltage Selector	AA
F501	QFS-C800CAGNI	Fuse, 80mAT	AF
SO501	QSOCE0410AGZZ	Voltage Selector	AH
F502, F503, F504	QFS-C631CAGNI	Fuse, 630mAT	AE
140	PSLDM3122AFZZ	Shield Bracket, Reed Switch	AC
	QPLGA0201AGZZ	Plug, Mains Supply Cord	AE
141	PSPAV0055AFZZ	Spacer, L.E.D.	AC

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